

CLAIMS

1. A metal halide lamp comprising:

an arc tube having an envelope made of translucent ceramic,
a pair of electrodes disposed therein, and one or more halides
5 are enclosed therein; and

a casing tube surrounding at least a portion of the arc
tube, the portion positionally corresponding to, in a radial
direction of the arc tube, a space between the electrodes,
wherein

10 $L/D \geq 4$, where L is a length of the space between the
electrodes and D is an internal diameter of the arc tube, and

$R/r \geq 3.0$, where R is an internal diameter of the casing
tube and r is an external diameter of the arc tube, within a
region positionally corresponding to, in the radial direction,
15 the space between the electrodes, on a cross-sectional surface
where an outer circumference of the arc tube comes closest to
an inner circumference of the casing tube.

2. The metal halide lamp of Claim 1, wherein

20 $4.7 \leq R/r \leq 8.0$.

3. The metal halide lamp of Claim 1, wherein

$4 \leq L/D \leq 10$.

4. The metal halide lamp of Claim 2, wherein

$$4 \leq L/D \leq 10.$$

5. The metal halide lamp of Claim 1, wherein

5 the arc tube is disposed in a hermetically-sealed space,
and

a degree of vacuum in the space is no more than 1×10^1 Pa
at 300 K.

10 6. The metal halide lamp of Claim 4, wherein

the arc tube is disposed in a hermetically-sealed space,
and

a degree of vacuum in the space is no more than 1×10^1 Pa
at 300 K.

15

7. The metal halide lamp of Claim 5, wherein

one or more oxygen-releasing getters are disposed in the
space.

20 8. The metal halide lamp of Claim 6, wherein

one or more oxygen-releasing getters are disposed in the
space.

9. The metal halide lamp of Claim 1, wherein

the halides include sodium.

10. The metal halide lamp of Claim 8, wherein
the halides include sodium.

5

11. A luminaire comprising:
a metal halide lamp recited in one of Claims 1 to 10;
and
a lighting circuit for illuminating the metal halide lamp.